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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,750	08/19/2003	Norihito Fujita	040405-0364	3763

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EXAMINER	
KEEFER, MICHAEL E	
ART UNIT	**PAPER NUMBER**
2154	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/642,750	FUJITA ET AL.	
	Examiner	Art Unit	
	Michael E. Keefer	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-11,13-18 and 24-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-11,13-18 and 24-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed 4/30/2007.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 24, 29, and 32-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Ebrahim (US 6154777).

Regarding **claim 24**, Ebrahim discloses:

A packet transfer method resolution server (Fig. 4 Server 150) comprising:

a packet transfer method database (Fig. 4 Memory 170 can hold the data used by Name Resolver 180, i.e. Col. 4 64-65, multiple binding tables) where the correspondences between several types of information contained in the packet and one or more type of information related to the packet transfer method are registered, and

a packet transfer method resolution request acceptance section (Fig. 4 Name Resolver 180) that accepts the packet transfer method resolution request from the packet transfer equipment that transfers the received packet to another node inquiring the information related to the transfer method of said received packet (Fig.4 Requester 1 100, Fig. 3, step 20) and specifying several types of information contained in said received packet, (Col 5 items listed under A. (lines 23-38)) refers to said

packet transfer method database (it is inherent that in order to resolve the information and provide a response to the requester that the binding tables must be consulted as part of step 30 in Fig. 3) and replies one or more type of information related to the transfer method of said received packet to said packet transfer equipment (note the last step of claim 14, wherein the destination address is transmitted to the requester).

Regarding **claim 29 as applied to claim 24**, Ebrahim discloses:

a resource information collection section (Col. 2, lines 49-56 describe that the DNS server must have a way of knowing information about network resources) and

an entry rewriting section (Col. 2, lines 49-56 describe that the DNS server will alter its tables based off of the information obtained about the network.)

Regarding **claims 32-35**, Ebrahim discloses:

A DNS server (Fig. 4 Server 150) comprising:

an IP address/FQDN correspondence database (Fig. 4 memory 170 can hold the data used by Name Resolver 180 to resolve a domain name or IP address i.e. Col. 4 64-65, multiple binding tables) and

a DNS resolution request acceptance section (Fig. 4 Name Resolver 180) that accepts the IP address resolution request inquiring the IP address corresponding to the FQDN from the packet transfer equipment that transfers the received packet to another node, (Step 20,

Fig. 3) refers to said IP address/FQDN correspondence database (Fig. 3 Step 30) and replies the IP address corresponding to said FQDN to said packet transfer equipment (Claim 14, "transmitting said destination address to said requester) as well as accepts the FQDN resolution request inquiring the FQDN corresponding to the IP address from said packet transfer equipment, refers to said IP address/FQDN correspondence database and replies the FQDN corresponding to said IP address to said packet transfer equipment (It is inherent for a DNS server to be able to accept rDNS (or reverse DNS) requests, i.e. the resolving of a name from an IP address).

Ebrahim further inherently discloses that the DNS server may be implemented in software (a program as stated in claims 50-53).

Regarding **claim 36 and as applied to claim 32**, Ebrahim discloses:

the FQDN or the IP address replied by said DNS resolution request acceptance section to said packet transfer equipment uniquely indicates the information related to one or more arbitrary transfer method contained in the processing method of rewriting, addition and deletion for one or more arbitrary piece of information in said received packet and/or the route through which said received packet is transferred and the resource control method for said route. (By processing a DNS or reverse DNS request the DNS server replies with information related to rewriting, or, deleting and adding information in a stored packet (either the IP

address or domain name) with information retrieved by the server (a new IP address or domain name) inherently.)

Regarding **claim 37 and as applied to claim 32**, Ebrahim discloses:

a resource information collection section (Col. 2, lines 49-56 describe that the DNS server must have a way of knowing information about network resources) and

an entry rewriting section (Col. 2, lines 49-56 describe that the DNS server will alter its tables based off of the information obtained about the network.)

4. Claims 1, 5, and 24-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Petersen, et al. (US 6985964 B1) hereafter Petersen.

Regarding **claim 1**, Petersen discloses:

A packet transfer equipment (Fig. 1) that transfers the received packet to another node characterized by:

the packet transfer equipment specifies several types of information contained in said received packet (Col 3 lines 21-35, describes that a parser assigns a vector to a packet indicating to a central processor what data should be retrieved from a packet for each packet), inquires of an external server (search engine PP 140, which in Col 2 lines 53-60 lists that it can be implemented on a separate computer or server from any other PPs or the central processor, the inquiry is made by the delivery of a search argument or request Col 3. Lines 45-48) about one or more type of

information related to the transfer method (see Col 3 lines 49-56 for exemplary types of information that can be returned) of said received packet and resolves the transfer method of said received packet according to one or more type of information obtained (Editor PP 150 performs this function, and can be either part of the central processor or the search engine PP 140 itself (Col 2 lines 66-67).

Regarding **claim 5 and as applied to claim 1**, Petersen discloses:

The information resolved by said external server (search engine 315) contains at least one of: information related to rewriting (Col 3 lines 49-56 describe information which can be returned by the search engine PP 140).

Regarding **claim 54 and as applied to claim 1**, Petersen discloses:

The information includes a destination IP address and destination MAC address. (Col. 3 lines 53-58 disclose that various types of lookups can be performed, including layer 2 (MAC address) and layer 4 (IP address) and that multiple of these may be returned "Typically only one of the lookups..." which inherently discloses that in other situations more than one of the lookups will return a result.

Regarding **claims 24-27**, Petersen discloses:

a packet transfer method database (a database is inherent because in Col. 3 lines 53-54 "routing lookups" is disclosed, and a lookup must have a database to reference to obtain data) where the correspondences

between several types of information contained in the packet and one or more type of information related to the packet transfer method are registered, and

a packet transfer method resolution request acceptance section (search engine PP 140) that accepts the packet transfer method resolution request from the packet transfer equipment (Central processor 110 or Packet deconstructor 130) that transfers the received packet to another node inquiring the information related to the transfer method of said received packet and specifying several types of information contained in said received packet, (Note that a search argument, containing information pulled from a packet is sent to the search engine PP (Col. 3, lines 35-48) as a request for results on information in the packet that may be changed) refers to said packet transfer method database (note that various types of routing lookups can be performed. Col. 3, lines 53-54) and replies one or more type of information related to the transfer method of said received packet to said packet transfer equipment (Col 3 lines 56-57).

Petersen further discloses that his invention may be implemented in software (Col. 5 lines 6-8).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 6, 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen in view of Huitema (US 6016512).

Regarding **claim 6**, Petersen discloses:

A packet transfer equipment that transfers the received packet to another node comprising:

A packet information extraction section (Packet deconstructor PP 120) that extracts several (or one or more) types of information contained in said received packet (Col 3 lines 39-41 state that the deconstructor pulls or extracts information from the packet), and

a packet transfer method resolution section (Central Processor 110, see Col. 3 lines 46-49) that specifies said several types of information extracted by said packet information extraction section (search argument as stated in Col. 3 lines 43-48) and inquires of an external server (Search engine PP 140, note in Col. 3 lines 45-48 the argument is delivered to the search engine for searching) about one or more (or several) type of information related to the transfer method of said received packet and resolves the transfer method of said received packet according to one or more (or several) type of information obtained (Col. 3 lines 56-57 where the search result is returned to the central processor).

Petersen further discloses that his invention may be implemented in software (Col. 5 lines 6-8).

Regarding **claim 10 and as applied to claim 6**, Petersen discloses:

That the information resolved contains at least one of: information related to the rewriting of the information contained in the received packet (Col 3 lines 49-56 describe information which can be returned by the search engine PP 140).

Regarding **claim 17 and as applied to claim 6**, Petersen discloses:

A service input section (Packet parser 120 determines a service type or vector for the packet)

An extracted packet information conversion section (central processor 110, see Col 3 lines 60-63, which show that in an exception (i.e. a certain service type determined by Packet parser 120) the central processor can modify the destination returned by the lookups.)

Petersen discloses all the limitations of claims 6, 10, and 17 except for a packet transfer storage table and that the packet transfer method resolution section checks to see if the transfer method has been stored in the packet transfer storage table before querying an external server for the information.

The general concept of caching previous values queried from an external server is well known in the networking art as taught by Huitema in Fig. 2. (Note that a query is made to local server 120, which then stores the answer to the query in step 165, so that

when the query is made again in step 167 from the local computer 110 the local server 120 does not query any remote servers.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the packet transfer equipment of Petersen with the general concept of caching previously requested values as taught by Huitema in order to reduce the amount of network traffic to the external server.

7. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen and Huitema as applied to claim 6 above, and further in view of Ebrahim.

Regarding **claim 14**,

Petersen and Huitema teach all the limitations of claim 14 except for the packet transfer method resolution section uniquely recognizing the transfer method of a packet based off of a domain name or IP address.

The general concept of address resolution to obtain a unique destination is well known in the networking art as taught by Ebrahim, which teaches a Name resolver, which will recognize a transfer method of a domain name or IP address.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Petersen and Huitema with the general concept of address resolution as taught by Ebrahim in order to make the search engine PP more versatile.

Regarding **claim 15**,

Petersen and Huitema teach all the limitations of claim 15 except for the packet transfer method resolution section repeating a request for resolution to a domain resolution server.

The general concept of address resolution to obtain a unique destination is well known in the networking art as taught by Ebrahim, which teaches a Name resolver, which will recognize a transfer method of a domain name or IP address.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the search engine PP of Petersen with the general concept of address resolution as taught by Ebrahim in order to make the search engine PP more versatile.

The general concept of repeating requests that fail is well known in the networking art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Petersen and Huitema with the general concept of address resolution as taught by Ebrahim and the general concept of repeating requests in order to reduce the amount of error conditions.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen and Huitema as applied to claim 6 above, and further in view of Roberts (US 2002/0080786 A1).

Regarding **claim 11**,

Petersen and Huitema teach all the limitations of claim 11 except for the extractor extracting information over two or more packets.

The general concept of grouping packets together to route together is well known in the networking art as taught by Roberts. (Similar packets are grouped together so that one QoS request can be made.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Petersen and Huitema with the general concept of grouping packets together as taught by Roberts in order to decrease the amount of queries made to the external server for transfer information.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen and Huitema as applied to claim 6 above, and further in view of Loucks et al. (US 5434974) hereafter Loucks.

Regarding **claim 13**,

Petersen and Huitema teach all of the limitations of claim 13 except for the packet transfer method resolution section creating a FQDN or IP address indicating the information contained in said received packet.

The general concept of creating a unique name to identify a transfer method is well known in the art as taught by Loucks (Col. 5 lines 53-66 where it is taught that a name contains an address space which is a set of addresses for objects defined in the naming system, which may be any type of information extracted from a received packet).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Petersen and Huitema with the general concept of

creating a unique name as taught by Loucks in order to make the system more interoperable with external networks.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen and Huitema as applied to claim 6 above, and further in view of Loucks and Wesinger, Jr. et al. (US 5870550) hereafter Wesinger.

Regarding **claim 16**,

Petersen and Huitema teach all of the limitations of claim 13 except for the packet transfer method resolution section creating a FQDN indicating the information contained in said received packet.

The general concept of creating a unique name to identify a transfer method is well known in the art as taught by Loucks (Col. 5 lines 53-66 where it is taught that a name contains an address space which is a set of addresses for objects defined in the naming system, which may be any type of information extracted from a received packet).

It would have been obvious to one of ordinary skill in the art to modify Petersen and Huitema with the general concept of creating a unique name as taught by Loucks in order to make the system more interoperable with external networks.

Petersen and Loucks disclose all of the limitations of claim 16 as cited above except for the packet transfer equipment resolving the FQDN into an IP address, and then resolving the IP address into a FQDN to determine the transfer method of the packet.

The general concept of checking that an address resolves to the same name that it was resolved from is well known in the art as taught by Wesinger (Col. 6 lines 29-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Petersen, Huitema and Loucks with the general concept of checking that an address resolves to the same name that it was resolved from as taught by Wesinger in order to more securely route packets through the network.

11. Claims 31 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebrahim as applied to claims 24 and 32 above, and further in view of Squire et al. (US 7139838 B1) hereafter Squire.

Regarding **claims 31 and 39**,

Ebrahim discloses all of the limitations of claims 31 and 39 except for a packet transfer policy description section and an entry rewriting section.

The general concept of using a policy to rewrite network transfer method information is well known in the art as taught by Squire (note policy software module 106, which filters updates to network transfer information (Col. 2 lines 50-53) before deciding to distribute the information (i.e. re-write the databases) of peer equipments (Col 3 lines 2-6)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the resolution server of Ebrahim with the general concept of using a policy to rewrite network transfer method information as

taught by Squire in order to ensure the integrity of the transfer method information.

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen and Huitema as applied to claim 6 above, and further in view of Metin et al. (US 2002/0031142 A1) hereafter Metin.

Regarding **claim 18**,

Petersen and Huitema teach all of the limitations of claim 18 except for a resource control section that makes a request for resource control of another node.

The general concept of a packet transfer equipment making a resource control request is well known in the art as taught by Metin ([0040] lines 3-7 describes a method of a switch reserving network resources if necessary).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Petersen and Huitema with the general concept of a packet transfer equipment making a resource control request as taught by Metin in order to ensure a quality of service for transferred packets.

13. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebrahim as applied to claim 32 above, and further in view of Metin.

Regarding **claim 39**,

Ebrahim discloses all of the limitations of claim 39 except for the DNS server comprising a resource control section that makes a request for resource control of another node.

The general concept of making a resource control request is well known in the art as taught by Metin ([0040] lines 3-7 describes a method of a switch reserving network resources if necessary).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the DNS server of Ebrahim with the general concept of making a resource control request as taught by Metin in order to free resources from the packet transfer equipment so that packets may be transferred more quickly.

14. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen as applied to claim 24 above, and further in view of Metin.

Regarding **claim 31**,

Petersen discloses all the limitations of claim 31 except for the packet transfer resolution server sending a request for resource control as additional information to the packet transfer equipment.

The general concept of a packet transfer equipment needing to know if resource control is necessary is well known in the art as taught by Metin ([0039] lines 14-17 indicates that the required resources are indicated in a request for a packet transfer session).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the packet transfer control method resolution server of Petersen with the general concept of a packet transfer equipment needing to

know if resource control is necessary as taught by Metin in order to make sure that a packet receives the quality of network resources that it needs.

Response to Arguments

15. Applicant's arguments filed 4/30/2007 have been fully considered but they are not persuasive.

Summary of Applicant's Arguments

1) The Applicant requests that the objections to the specification and title be withdrawn.

2) The Applicant requests that the objections to the claims be withdrawn.

3) The Applicant requests that the rejection of claims 1-53 under 35 U.S.C. 101 be withdrawn.

4) The Applicant requests that the rejection of claims 1-18, 32-39, and 50-53 under 35 U.S.C. 112 be withdrawn.

5) The Applicant requests that the rejection of claims 1-10, 19-28 and 42-49 under 35 U.S.C. 102(b) over Muller (US 6128666) be withdrawn because Muller does not recite an external server.

6) The Applicant requests that the rejection of claims 1-10, 19-29, and 40-49 under 35 U.S.C. 102(e) over Petersen be withdrawn because Petersen does not disclose an external server for the resolution of packet information.

7) The Applicant requests that the rejection of claims 24, 29, 32-37 and 50-53 under 35 U.S.C. 102(b) over Ebrahim be withdrawn because Ebrahim does not disclose

a database with correspondences between packet information and transfer method information.

Response to Applicant's Arguments

1) The Examiner withdraws the objections to the specification and title therefore Applicant's arguments are moot.

2) The Examiner withdraws the objections to the claims therefore Applicant's arguments are moot.

3) The Examiner withdraws the rejection of the claims under 35 U.S.C. 101 in view of Applicant's amendment.

4) The Examiner withdraws the rejection of the claims under 35 U.S.C. 112 in view of Applicant's amendment.

5) The rejection of the claims over Muller have been withdrawn, therefore Applicant's arguments are moot.

6) Regarding Applicant's argument regarding Petersen does not disclose making an inquiry to an external server, nor resolving a transfer method using the information gained from the external server, the Examiner notes that a peripheral processor is, as disclosed by Petersen, an external server. Note Col. 2, lines 53-64, "any PP may be ... or a general-purpose, fully programmable computer". The resolving of information is done by the packet editor, where it resolves the packet information into the packet by substituting the desired transfer method into the packet.

7) Regarding Applicant's argument, since Ebrahim is resolving a packet transfer method based off of criteria resident in the packet, a database (i.e. a data structure, a

table, etc) containing a correspondence between the information at hand, and the information that is trying to be resolved is inherent.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Keefer whose telephone number is (571) 270-1591. The examiner can normally be reached on Monday-Thursday 7am-4:30pm, second Fridays 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER
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MEK 6/20/2007